PUGET SOUND ACTION TEAM
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SOUND WAVES

GROWTH MANAGEMENT IN PUGET SOUND

Local governments, citizens work on growth plan updates

Cities and counties have been using the **Growth Management Act** (GMA) to guide land-use decisions in Puget Sound since its adoption in 1990. From 1960 to 2000 the population of Puget Sound doubled from 2 million to 4 million people, and is projected to add about 1.5 million people by 2020. The state legislature passed the GMA to prevent this growth from causing unmanaged and unplanned sprawl with its damaging effects on the state's environment, economy and quality of life.

The law required that local governments planning under the act designate areas for urban growth where services already exist and direct growth to those areas. Local governments must ensure that public facilities such as schools, and services such as roads, sewer and water systems precede or accompany growth. The GMA also required that cities and counties map and adopt ordinances to protect and manage critical areas, including flood and geologic hazard areas, wetlands, "aquifer recharge areas" (sites where the rainwater infiltrates to replenish groundwater), and fish and wildlife habitat. In addition, counties designated and protected agricultural, forestry and mining lands as long-term commercial land uses preserved for resource industries.

Goals of the act include preventing sprawl, protecting property rights and requiring citizen participation. The act also calls for affordable housing, economic development, coordinated and efficient transportation systems, open space and recreation, environmental protection and historic preservation.

Why are updates needed?

During the last 12 years, communities developed and adopted comprehensive plans and development regulations in line with the GMA. Because the state legislature passed amendments to the act during those years, some local governments are no longer up-to-date with the current law.

In 2002, legislators adopted a schedule that required local governments to update land-use plans and ordinances to bring them into compliance with the changes in the law.

"Cities and counties that adopted their plans and ordinances early in the 1990s may need to consider more changes than will those that adopted plans later," said **Leonard Bauer,** director of Growth Management Services at the **Office of Community, Trade and Economic Development (CTED).**

"Most local governments in Puget Sound are beginning to review their plans. They are working with their citizens to address changes in state requirements or to better carry out the community's vision for its future."

Deadline for GMA updates

Puget Sound counties and the cities within them will need to review and possibly revise their comprehensive plans by the following dates:

December 2004:
- Clallam
- Jefferson
- King
- Kitsap
- Pierce
- Snohomish
- Thurston
- Whatcom

December 2005:
- Island
- Mason
- San Juan
- Skagit

Key changes in GMA

The law requires all Puget Sound jurisdictions to review and possibly revise plans and ordinances by either December 2004 or December 2005.

Several key amendments to the GMA that relate to protecting Puget Sound include:

- **1995**—Local governments must include the **best available science** in designating and protecting critical areas, and must give special consideration to preserving or enhancing fish stocks that migrate to the ocean and return to their native streams to reproduce.
  1995—The goals and policies of the **Shoreline Management Act** became a goal of the GMA, and goals and policies of local Shoreline Master Programs must become an element of the local jurisdiction's comprehensive plan.
- **1997—Higher density development** is allowed in areas designated as limited areas of more intensive rural development that existed prior to July 1990, outside of areas marked for urban expansion known as "urban growth areas." State law defines these limited areas of more intensive rural development as existing commercial, industrial or residential areas or areas of mixed land uses, whether they are along shorelines or in villages, hamlets, rural activity centers or crossroads communities.

State agencies provide local governments with technical assistance and guidance. CTED coordinates with agencies to avoid duplication of effort and to offer local governments assistance early in the update process. CTED also coordinates state agency review of GMA plan updates.

The Puget Sound Action Team provides a packet of updated GMA information with references to a number of online resources. Visit our website to see this material: http://www.psat.wa.gov/Programs/GMA/GMA.htm.

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Local governments take action to protect watersheds

Action Team photo

Watershed plans can recommend regulations for future growth with the goal of protecting important watershed resources.

Throughout Puget Sound, cities and counties are taking action to protect watersheds and habitat through land-use measures. At the same time, watershed and salmon recovery planning groups are starting to incorporate land-use actions into watershed plans.

Local governments will adopt actions from watershed plans into land-use plans and ordinances during updates as directed by GMA. Depending on the scope of a watershed plan, it may call for measures to protect aquifers, water quality, salmon and other habitat or streams with low flows.

"Resource managers agree that thoughtful land-use planning is key to improving the health of our watersheds," said **Harriet Beale,** outreach manager for the **Puget Sound Action Team.**

"Bringing together GMA and watershed planning means that local watershed plans will call for changes to land-use regulations as part of the solution to water resource problems," Beale said.

Changes to critical areas ordinances

Changes to critical areas ordinances will include new information from watershed assessments. (Critical areas ordinances are described in the article on page 1.) New measures for protecting watersheds in critical areas ordinances may include:

- Measures to protect infiltration in "aquifer recharge areas" or areas where rainwater infiltrates to replenish groundwater. **Island County**'s watershed planning group will consider land-use recommendations for areas where the recharge of water to groundwater supplies is at risk.
- Measures to protect spawning areas for forage fish as well as kelp and eelgrass beds, such as requirements to retain trees, shrubs and natural habitat along the shoreline. As examples, **Clallam County** adopted a critical areas ordinance that addressed shoreline modifications, and **San Juan County** is considering language to protect areas where forage fish spawn.

Changes in zoning will protect natural resources

A review of the jurisdiction's zoning can take into account the following:

- In small basins with important natural resources, changes may include directing growth into other areas, lowering the density of homes and businesses, restricting some land uses or establishing stronger stormwater requirements. **Kitsap County** will use a new "Planning by Watershed" approach to develop detailed subarea land-use plans for small watersheds where resources are at risk.
- In areas where polluted waters threaten shellfish harvesting activities, the upland area may require stronger regulations for on-site sewage systems. **Clallam County** adopted special on-site sewage regulations for their Carlsborg Urban Growth Area upstream of Dungeness Bay.
- Some counties may want to consider designating commercial shellfish beds as "agricultural lands of long-term commercial significance," or lands zoned to preserve them for agricultural production. This would protect shellfish farms from nearby activities that are incompatible or could harm shellfish growing operations. **Jefferson County** did this in its 1998 comprehensive plan.

Stormwater is key in growth areas

In areas likely to experience growth, stormwater management can affect the recharge of groundwater supplies, the quality and quantity of water in streams and lakes, fish habitat, and hazards such as landslides and flooding. Good examples of local governments providing better stormwater management include:

- The city of **Oak Harbor** adopted policies to implement the Puget Sound stormwater program and to encourage low impact development .
- **Snohomish County** adopted an ordinance to promote projects that demonstrate low impact development techniques.
- **Kitsap County** put forward regulations limiting the amount of paved surfaces that block the infiltration of stormwater and encouraged developers to retain existing trees, shrubs and other vegetation on development sites.
- The city of **Bellingham** approved street widths of 18 feet (reduced from 28 feet) to protect the quality of water in the Lake Whatcom watershed.
- **Pierce County** is reviewing standards for low impact development that will become part of its stormwater regulations.

For more information contact **Harriet Beale** at (360) 725-5442 or hbeale@psat.wa.gov.

Under GMA shellfish beds can be protected as resource lands

Photo courtesy of Taylor Shellfish Co., Inc.
Oyster beds at low tide in Totten Inet, Thurston County.

Counties can use GMA to conserve commercial shellfish beds by designating them as **agricultural lands of long-term commercial significance.** The GMA defines agricultural lands to include areas devoted to the commercial production of animal products, which includes oysters, clams and other farmed shellfish.

The resource land designation works well for aquaculture operations because the commercial activity occurs directly on the land where the crops are grown and harvested. Like other natural resource operations, the designation allows shellfish farmers to carry out normal farming activities that others who later build in the area might find objectionable.

"The use of these resources has meant a lot to the people and economy of this region for generations, for commercial, recreational and tribal harvesting. As our population and communities grow, protecting these resources will become all the more important and challenging," said **Stuart Glasoe,** shellfish specialist with the **Action Team.**

The resource land designation can provide an added benefit by allowing accessory uses, such as shellfish processing plants, on or near the resource lands. This can help avoid broader zoning changes that could potentially bring in other industrial uses that could conflict with long-term commercial use of the tidelands.

Jefferson County has protected shellfish beds in this way at the urging of shellfish growers in north Hood Canal. The county adopted a resource land designation for commercial shellfish growing areas in its 1998 comprehensive plan. In 2003, **Thurston County,** located in south Puget Sound, adopted additional aquaculture policies to the natural resource lands chapter of its comprehensive plan. The policies are aimed primarily at preserving an adequate resource base for long-term aquaculture and limiting incompatible, adjacent land uses. Actual designations have not yet been adopted, but the revised policies set the stage for future action.

The intent of the GMA provision is to protect shellfish beds from pollution that can threaten the condition of the shellfish and their harvest classification. The resource land designation can assist jurisdictions to more effectively and permanently protect water quality in shellfish growing areas, while prohibiting incompatible, adjacent land uses and development.

Counties face urban concerns in rural areas

A GMA amendment in 1997 allowed for counties to designate "limited areas of more intense rural development" (LAMIRDs), or areas with higher density development as they existed before the GMA was passed in July 1990. The amendment allows new high-density development in the undeveloped portions of LAMIRDs, although they are outside of areas designated for urban growth.

In Puget Sound, counties with commercial and residential development in unincorporated rural areas used the amendment to designate LAMIRDs.

When counties make updates to their land-use plans and ordinances, they can adopt policies aimed at managing the urban-type drainage problems of these special rural areas.

LAMIRDs can benefit from low impact development by managing stormwater with fewer disturbances to the environment.

Action Team photo
Freeland, in unincorporated Island County, has stormwater issues similar to those in urban areas.

Low impact development practices include retaining trees and existing vegetation, using new techniques to clean and infiltrate runoff, and reducing the amount of paved surfaces.

Counties can adopt regulations that would:

- Limit impervious surfaces (areas such as roads, parking lots and sidewalks that allow for little or no filtration of rainwater into groundwater) and retain existing trees and shrubs.
- Install bioretention facilities to clean and, where possible, infiltrate stormwater.
- Add components to soils to take up or slow the amount and timing of stormwater runoff.
- Encourage the installation of parking lots and driveways with pervious pavers or porous pavements, new methods that allow for the infiltration of stormwater through the pavement.

Rural counties face potentially higher costs for providing stormwater protection in areas of more intense development. As LAMIRDs continue to develop, low impact stormwater measures can help reduce the drainage and pollution problems that can occur in these specially designated areas.

For more information on low impact development, visit the Action Team's website at http://www.psat.wa.gov/Programs/LID.htm.

The Puget Sound Ambient Monitoring Program (PSAMP) is a coordinated effort among state, federal and local agencies to measure the health of Puget Sound's waters and resources. The program complements monitoring by local governments and citizen volunteers.

Protecting critical areas in the nearshore

Since many local governments first adopted their critical areas ordinances (see Page 1) in the 1990s, scientists have learned a lot more about nearshore habitats. Several important species of forage fish such as surf smelt, sand lance and herring live and spawn on the shoreline or in the shallow marine waters of Puget Sound.

Development activities can harm these fragile areas. Designating the areas as critical habitat areas for fish and wildlife under GMA is one of the best ways local governments can protect the habitat. Landowners can use critical areas maps and regulations to design projects that avoid harming or altering habitat. This planning can prevent delays that might otherwise occur in the permitting process.

Puget Sound cities and counties will revise critical areas ordinances using the results of scientific studies and inventories conducted in the past decade. This information will help protect habitat for forage fish in updates required by GMA that are due in 2004 and 2005.

Why are these habitats critical?

Surf smelt and sand lance lay their eggs high up on beaches, usually above the ordinary high water mark. Herring rely on eelgrass beds for their spawning areas. Eelgrass beds grow in the clear, shallow waters just offshore. Kelp beds provide habitat for species that serve as food for other predatory fish, birds and mammals.

"These species are critical links in the marine food web of Puget Sound," said **Doug Myers, with the Action Team's habitat program**. "Salmon and many other species feed on them. Protecting their habitat is key to maintaining the health of the ecosystem."

The Department of Fish and Wildlife's management plan for forage fish calls for protecting spawning habitats for forage fish. The plan is available at www.wa.gov/wdfw/fish/forage/forage.htm.

Action Team photo
Surf smelt (circled) spawning on gravel beach.

Shade—when is it good and when is it bad?

Because they are underwater plants, eelgrass beds need light. When shaded by a structure such as a bridge or dock, the eelgrass bed will diminish in health and size.

Forage fish lay their eggs high on the beach with or without shade. However, research shows that when the eggs are exposed to high doses of sunlight, fewer fish survive because the eggs dry out.

Measures to protect habitats

Protection measures for surf smelt and sand lance habitats require that development projects maintain the shoreline trees, shrubs and other plants for shade. Activities must also avoid interrupting the sediment supply that moves along the shoreline and replenishes the sand and gravel of the beach. Bulkheads and other hard shoreline protection methods can block supplies of sediment and damage and scour the habitat areas.

For kelp and eelgrass beds, protection measures must prevent the blockage of light by docks and piers and disturbance from mooring buoys or marine-related activities. In addition, excessive nutrient concentrations in runoff from lawn and garden fertilizers, pet waste and leaking septic systems can cause phytoplankton blooms that reduce or keep light from penetrating to the kelp and eelgrass beds.

Most local governments adopt critical areas ordinances separately from the maps that show where critical areas are located. This allows them to update the maps as new information becomes available.

"Since forage fish choose different beaches from year to year, all potential habitat should be protected," Myers said.

Where is the best available science located?

Various sources of remote sensing and on-the-ground beach surveys are available for inventories of forage fish spawning habitat. **Dan Penttila of Washington Department of Fish and Wildlife** developed protocols for surf smelt and sand lance inventories.

The seven counties—**Clallam, Jefferson, Island, Snohomish, Skagit, San Juan,** and **Whatcom**—of the Northwest Straits Commission are conducting inventories to identify surf smelt and sand lance spawning areas and eelgrass beds.

For more information:

- **Washington Department of Natural Resources ShoreZone inventory**. Soundwide mapping and data of eelgrass and kelp distribution to help cities and counties develop habitat protection plans.
- **Washington Department of Fish and Wildlife field offices.** Spawning area information.
- **Department of Community, Trade and Economic Development**. *Citations of Recommended Sources of Best Available Science* includes references for forage fish inventories. (See www.ocd.wa.gov/growth)
- **Washington Department of Ecology's website.** http://www.ecy.wa.gov/programs/sea/SMA/lines/inventoryanalysis.html.